



# EM Fact Sheet

Ogden Air Logistics Center  
Environmental Management Directorate  
7274 Wardleigh Road  
Hill AFB, Utah 84056-5137

## Pesticides Management

**Purpose:** This fact sheet provides the program description for and a summary of pest problems and control procedures at Hill Air Force Base. The primary objective of pest management is to ensure effective control of the listed pest species as programmed on the AF Form 646. Control procedures are planned and accomplished in accordance with applicable laws and regulations which are effective, economically feasible, environmentally sound, and in compliance with the DoD Pest Management Program.

**Mission:** To effectively practice integrated pest management with minimum use of chemicals based on environmental awareness and knowledge of pest biology, thereby reducing impacts on human health and the environment while ensuring compliance with all applicable federal, state, local and Air Force standards and regulations.

**Meet the Team:** Environmental Management's Pesticides Team and corresponding responsibilities are shown in Table 1.

Table 1 - The Natural Resources Team

CONTACT	PROGRAM
<b>Marcus Blood</b> 777-4618 Marcus.blood@hill.af.mil	Natural Resources Program Manager
<b>Sanford Moss</b> 775-6972 Sanford.moss@hill.af.mil	Natural Resources Program Specialist

## Program Highlights

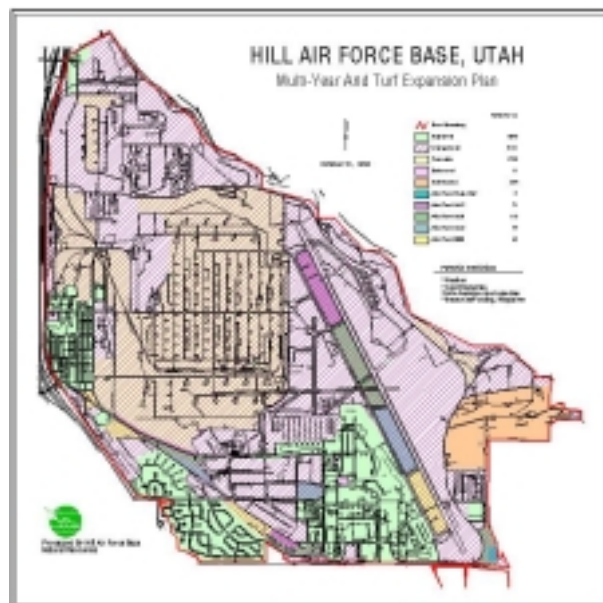
**Introduction:** The Environmental Management Pollution Prevention's (EMP) Pesticides Management Program is an integrated surveillance and control effort based on U.S. Air Force implementation of DoD Directive 4150.7 *DoD Pest Management Program* and AFI 32-1053. The base program is designed to provide safe, effective, and economic control of the pest problems that affect Hill Air Force Base associated lands. Pests that exist in these areas include insects such as mosquitoes, termites, spiders, etc., rodents, nuisance birds (i.e. starlings and pigeons), pest vegetation and other pest organisms. Pest control services at the base are provided by the base civil engineering pest management section with the exception of a contract to provide services for base housing herbicide and landscape care. The diverse aspects of the program require coordination with several offices at Hill AFB, primarily Civil Engineering, EM's Natural Resources, and Bioenvironmental Engineering.

**Goals and Strategies:** The goal of the pesticide program is to reduce the current distribution and prevent the spread and invasion of noxious or invading weeds, mosquitoes, household and nuisance pests, and miscellaneous pests. The methods used

in developing the control procedures have included conducting surveys and establishing existing descriptions of baseline conditions by describing distribution, species composition, and abundance characteristics. These baseline descriptions are used to monitor future trends and to assess the effectiveness of management efforts in controlling distribution.

In a continuous effort to reduce the reliance on chemical pesticide use, an integrated pest management (IPM) approach has been developed and is being used. This alternative IPM approach to pest management is the strategy of controlling populations at tolerable levels rather than working to eliminate them entirely. IPM is the selection, integration, and implementation of suitable combinations of pest control methods in an effective balance that minimizes undesirable side effects. Prevention, biological, cultural, and mechanical control, and accomplishments made to improve rangelands have been incorporated into the management process. The key elements in an IPM program include:

- Proper identification of problem pests and knowledge of their life cycles.
- Close monitoring of the pest activities and populations.
- Application of appropriate controls which are most effective in reducing the pest population.
- Adjustment of control measures to avoid injuring nontarget species and the environment.



By planting desirable species of grasses that will out-compete pest vegetation and provide less desirable habitat to certain pest insects, bird-aircraft strike hazards along the airfield can be significantly reduced without the use of harmful chemicals.

Improving rangelands in semi-improved and unimproved areas has also been a management strategy. This strategy integrates numerous components to minimize impacts of weeds and insects. To control an existing weed or insect infested area the sources or causes of the weeds and insects must be determined. Effective control of weeds and insects will not be complete until the sources or causes have been eliminated. Some sources and causes of weed and insect infestation can include past disturbances / non-native species introduction, land uses, grazing, burning, and chemical overuse.



Primary methods of weed control include the creation of monitoring plots like this one on the Little Mountain Testing Facility. The undesirable scotch thistle (*Onopordium acanthium*) has been monitored to help in identifying the best control methods.

The method of pest management by prevention has been a way to avoid pest establishment and / or eliminate individual survivors. This is accomplished through employing sanitary procedures to prevent spreading, using aggressive management to remove existing populations, recognizing and eliminating new pest species before they multiply and become established, and changing land use practices. The prevention of prime habitat for certain species is also a method of control through rangeland management.

Biological control involves the introduction and management of selected natural enemies of the pest. The associated impacts to the pest can be direct or indirect. Direct impacts for weed control destroy vital plant tissues and functions. Indirect impacts increase stress on the weeds which may reduce their ability to compete with desirable plants. Biological control for weeds can include insects, microbial and viral agents (biological herbicides), plant pathogens, and nematodes. Biological control of grasshoppers can include bacteria, parasites, and predators such as flies and ground beetles.



The Russian thistle (*Salsola iberica*) has been identified to thrive especially in disturbed areas on Hill AFB lands. Monitoring and control measures are being undertaken using integrated pest management methods, particularly identification of a species that will out-compete this weed.

**Inspections:** Inspections promote compliance with the DoD regulations, federal and state laws, and confirm that Hill AFB is operating within the conditions outlined in the Hill AFB Pesticide Management Plan. External and internal ECAMP inspections are conducted once a year to identify areas of pesticide management that are in need of improvement to meet or exceed the required standards.

**Certification:** To meet the guidelines set forth by the Environmental Protection Agency, DoD regulations, and federal and state laws, all commercial and noncommercial applicators applying restricted use pesticides on Hill AFB associated facility premises are required to be licensed by the Utah Department of Agriculture.



Wise and limited use of pesticides as part of the Utah Test and Training Range Aerial Spray Program has provided an annual savings of 1 million dollars in maintenance and target down time for the Air Force munitions program.